The Quantitative Measurement of the Texture of   S/181/60/002/010/019/051
Polycrystalline Materials. The Textural Function B019/B056

that the sn-tupel of an arbitrary grain may be obtained from an n-tupel
attached to the system of coordinates, by a rotation which is within the
range of from g to g + dg. p(g) is normalized, following which it is found
that p(g) is not only a qualitative characteristic of the perfection of
an arbitrary textural type, but also a quantitative characteristic of the
textural type itself, as the textural type is determined by the symmetry
of the function p(g). The experimental determination of p(g) with the aid
of monochromatic X-ray light reflected on a section is briefly discussed.
If the material is ferromagnetic, p(g) may also be determined by methods
which evaluate the energy of the magnetic anisotropy. In the two following
voluminous sections, the development of the textural function p(g) for
polycrystalline material from grains with cubic lattice and the
development of a function for the specific free energy of the magnetic
anisotropy of a polycrystalline material from grains with cubic lattice
is dealt with in great detail. In this development, spherical harmonics
are used. It is shown how the relations obtained may be simplified for the
case of a cubic lattice. There are 13 references: 9 Soviet, 1 German, and
2 US.

Card 2/3

The Quantitative Measurement of the Texture of   S/181/60/002/010/019/051
Polycrystalline Materials. The Textural Function   B019/B056

ASSOCIATION: Ural'skiy politekhnicheskiy institut im. S. M. Kirova
                 (Ural Polytechnic Institute imeni S. M. Kirov)

SUBMITTED: July 8, 1959 (initially), March 22, 1960 (after revision)

Card 3/3

VIOLIN, A S

VIGLIN, A.S.

Anisotropy constants of ferromagnetic cubic crystals. Fiz.
tver. tela 2 no.2:331-346 F '60.   (MIRA 14:8)

1. Ural'skiy politekhnicheskiy institut imeni S.M. Kirova,
Sverdlovsk.
          (Anisotropy) (Magnetic materials)
            (Crystallography, Mathematical)

VIGLIN, A.S.; KUDRYAVTSEV, I.P.

Determination of the degree of perfection of texture in polycrystalline ferromagnetics. Part 2: Approximation of the distribution function p(   ), characterizing the degree of perfection of texture of cold rolled electrical steel. Fiz. tver. tela 1 no.2:261-264 F '59.   (MIRA 12:5)

1.Ural'skiy politekhnicheskiy institut im. S.M. Kirova, Sverdlovsk.
          (Steel--Metallography)

VIGLIN, A.S.

Solution of magnetostatic problems in infinite homogeneous anisotropic
media. Dokl.AN SSSR 96 no.3:457-458 My '54.   (MLRA 7:6)

1.Predstavleno akademikom L.D.Landau.
      (Electromagnetic theory)

S/109/61/006/008/006/018
D207/D304

9,1400

AUTHOR: Viglin, S.I.

TITLE: Transfer characteristics of a coaxial system with a periodic structure

PERIODICAL: Radiotekhnika i elektronika, v. 6, no. 8, 1961, 1308 - 1315

TEXT: In this paper the author continues the investigation of the so-called magnetodielectric line (Ref. 4: Trudy KhVAIVU, 1958, vyp. 106), and examines the distortion of impulses propagating along. this line, in particular, the rise time of the pulse in the load. The magnetodielectric line is one of a number of constructions which are used currently to increase the inductance per unit length without altering the radial dimensions of coaxial systems. These systems are used for the generation and delay of short pulses. The magnetodielectric line consists of a central conductor surrounded by a metal cylinder which is filled by a series of metal washers

Card 1/4

S/109/61/006/008/006/018
D207/D304

isolated from each other by dielectric spacers, and from the internal core and the external tube by dielectric tubes. The investigation of the distortion of transmitted signals is complicated by marked dispersion due to the series capacitance C_η arising between the metal washers. The equivalent circuit on which the calculations are based is shown in Fig. 3, where L, C and C_η are the inductance, capacitance and series capacitance respectively, Δx is the period of the structure. The magnetic field in the dielectric is ignored as the permeability of the metal washers is assumed to be high. The telegraph equations are derived for this system, and the Laplace transformation is used. The transfer characteristics are then determined, which leads to the following expression:

$$h(a, \tau) = h(a, 0) + a \int_0^\infty e^{-z} \Psi(\tau z) \Phi(az)\, dz. \tag{22}$$

where

$$h(a, 0) = 1 - a \int_0^\infty e^{-z} \Phi(az)\, dz, \tag{21}$$

Card 2/4

Transfer characteristics of ... •

24886.

S/109/61/006/008/006/018
D207/D304

$$\Psi(\tau z) = \cdots \Psi(\tau, z) + 1 = -\sum_{k=1}^{\infty} \frac{(-1)^k (\tau z)^{2k}}{\Gamma(k+1)\,\Gamma(2k+1)},$$

(18)

$$\Phi(\alpha z) = \frac{2z}{\alpha}\,\varphi_1(\alpha, z) = \frac{1}{\alpha^2 z^2 \sqrt{\pi}}\int_0^\infty \sqrt{y}\,e^{-\frac{y^2}{4\alpha^2 z^2}} J_1(2\sqrt{y})\,dy.$$

(19)

and $\tau = \omega_c t$, the parameter α is $\alpha = \omega_c \sqrt{LC}\, x$. The transfer charac-
teristics were calculated for $\alpha = 1; 2; 3; 5$, and they are shown
in graphic form. Using these graphs the duration of the pulse
front τ was determined as a function of the parameter α. The graphs
-show that if the delay time is measured until the instant when
$h(\alpha, \tau)$ reaches the 0.4 level, then $\tau_d = 1.04\,\alpha = \alpha$, i.e. the capa-
citance C_n does not influence the delay. The effective delay is
$t_{delay} = x\,\sqrt{LC}$, where x is the length of the delay line. The dura-
tion of the pulse front depends on the parameter α and increases

Card 3/4

Transfer characteristics of ...
24886

S/109/61/006/008/006/018
D207/D304

with increasing α. However, when the duration of the front approaches a limiting value and in practical calculations it can be taken $\tau = 5$, i.e. $t_{front} = 0.8/f_{cutoff}$. There are 6 figures and 9 references: 7 Soviet-bloc and 2 non-Soviet-bloc. The references to the English-language publications read as follows: V. Carley, Electronics, 1953, 4, 4, 26; H.E. Callman, Proc. I.R.E., 1946, 34, 6.

SUBMITTED: October 27, 1960

Fig. 3.
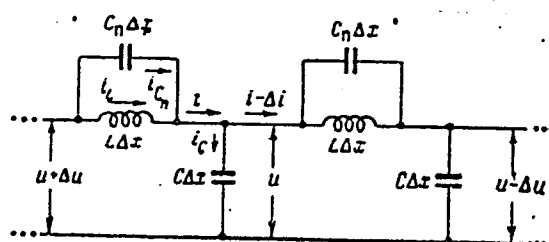
Card 4/4

VIGLIN, S.I.

Transfer characteristic of a coaxial system with periodic structure.
Radiotekh. i elektron 6 no.8:1308-1315 Ag '61.   (MIRA 14:7)
    (Radio lines) (Coaxial cables) (Pulse circuits)

ITSKHOKI, Yakov Semenovich; Prinimali uchastiye: SHATS, S.Ya.; GRIGORIN-
       RYABOV, V.V.; VIGLIN, S.I.; OVCHINNIKOV, N.I.; BOLOSHIN, I.A.;
       ZABOLOTSKIY, N.G., red.; KORUZEV, N.N., tekhn.red.

       [Pulse machines] Impul'snye ustroistva. Moskva, Izd-vo "So-
       vetskoe radio." 1959. 727 p.   (MIRA 12:7)
                    (Pulse techniques (Electronics))

ACC NR: AP7013156

AUTHOR: Viglin, S. I.

ORG: none

TITLE: Integral method of analyzing parametric networks

SOURCE: Radiotekhnika, v. 22, no. 1, 1967, 1-9

TOPIC TAGS: mathematic analysis, integral equation, integral function, pulse signal, electronic circuit, electric capacitance, computer calculation

SUB CODE: 12,09

ABSTRACT: ·The article presents a method suitable for analyzing parametric net-works where variations occur at a fast rate. This is an alternate version of the known integral method. The latter would involve tedious computations, since the integrand contains not only the unknown function but its derivatives as well. This difficulty is eliminated here. The new method is developed step-by-step similarly to the original method, except ·that the integral equation is solved for the complete pulse response and that the procedure for doing this is reduced to three successive operations: 1) solving the integral equation with a known kernel $g(t, \xi)$ or $G(t, \xi)$ in the integrand, 2) calculating the parametric pulse

Card 1/2

UDC: 62.501.7

0933 0868

ACC NR: AP7013156

response, 3) calculating the complete pulse response. All three steps are easily adaptable to computer calculations by way of appropriate algorithms. The new method is illustrated on a series-resonance circuit with variable capacitance. It is evident here that the method is valid regardless of the amplitude of capacitance variations. Orig. art. has: 2 figures and 29 formulas.

[JPRS: 40,450]

Card 2/2

S/115/63/000/001/004/017
E194/E135

AUTHORS: Vigman, B.A., and Dunayev, B.B.

TITLE: Determination of the accuracy of tolerance gauges

PERIODICAL: Izmeritel'naya tekhnika, no.1, 1963, 11-14

TEXT: To make go-no-go gauges unnecessarily accurate involves
expense, complication and loss of reliability. This article
describes a semi-graphical probability method of determining the
required gauge accuracy assuming normal distribution of product
variation and gauge errors. It is shown that determination of the
required accuracy of measurement consists in determining the ratio
δ/σ (δ = 3 times standard deviation of error of measurement, and
σ is the standard deviation of the product dimension from nominal) ·
for one of the following conditions: a given risk to the
manufacturer; a given risk to the purchaser; a given probability
of an incorrect answer; and a given risk to the manufacturer when
the gauge tolerance is reduced by a certain amount. Probability
formulae are derived for each of these cases and are used to plot
graphs of probability P against δ/σ.   The use of these graphs

Card 1/2

Determination of the accuracy of ...   S/115/63/000/001/004/017
E194/E155

is illustrated by numerical examples. The procedure is particularly
recommended in designing go-no-go gauges on automatic equipment and
it could be developed so as to determine for given values of product
quality and tolerance symmetry the gauge accuracy which gives the
lowest cost in automatic inspection operations.
There are 4 figures.

Card 2/2

VIGMAN, B.A.; DUNAYEV, B.B.

Determining the accuracy of tolerance controlling and measuring devices. Izm.tekh. no.1:11-14 Ja '63.   (MIRA 16:2)
         (Tolerance (Engineering)--Measurement)

VITAL, I. A.

2L337   VITAL, I. A. K otsenke proby Tarnogralskogo s "Sineachkom". Vracheb.
Delo, 1949, No. 8, STR. 693-96.

SO: Letopis, No. 32, 1949.

32/79410). The amt. of both forms mc. ————— Bohdan Jelinek

VIGNATI, K.

Carbon monoxide and a method of detecting in factories. p.176.
(Sklar A Kermik, Vol. 7, No. 6, June 1957, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC. Vol. 6, No. 9, Sept. 1957. Uncl.

VIGNATI, K

Czechoslovakia / Chemical Technology. Chemical Products   H-6
          and Their Application
          Safety Engineering. Sanitary Engineering.

Abs Jour: Referat Zhur - Khimiya, No 1, 1958, 1840

Author : Vignati Karel

Title   : Carbon Monoxide and Method for Its Determination
          in Work Areas

Orig Pub: Sklar a keramik, 1957, 7, No 6, 176-177

Abstract: The CO content of the air in work areas has the
          following permissible concentration level (in %
          by volume): according to Czechoslovak norm of
          1954, 0.003; according to GOST 1324-47, 0.0025;
          according to US norm of 1941, 0.01. A simple
          apparatus ("Labora-Simplex") is described, for
          colorimetric determination of the CO content of
          air. Operation of the apparatus is based on the
          reaction of CO with silica gel saturated with Mo

Card 1/2

Czechoslovakia /Chemical Technology. Chemical Products H-6
            and Their Application
            Safety Engineering. Sanitary Engineering.

Abs Jour: Referat Zhur - Khimiya, No 1, 1958, 1840

        salts, Pd sulfate and H_2SO_4. The orange-yellow
        color of this complex is changed to brilliant
        green to greenish-blue by the action of CO.
        Accuracy is from 0.001 to 0.1% by volume. Also
        described is an apparatus the operation of which
        is based on liberation of iodine from I_2O_5, by
        the action of CO at 110°; $I_2O_5 + 5\ CO = I_2 + 5$
        CO_2.

Card 2/2

VIGNATTI, Karel

The "Standard" siphon. Chem listy 59 no.3:330-332 Mr '65.

1. Laboratorni pristroje National Enterprise, Prague. Submitted May 7, 1964.

L 17977-66   EWT(1)/EPF(n)-2/T-2/ETC(m)-6   WW

ACC NR: AP6009987

SOURCE CODE: CZ/0008/65/000/003/0330/0332

AUTHOR: Virnalti, Karel

ORG: Laboratory Instruments, n.p., Prague (Laboratorni pristroje, n.p.)

TITLE: Siphon 'standard'

SOURCE: Chemicke listy, no. 3, 1965, 330-332

TOPIC TAGS: filtration, pump, hydraulic device

ABSTRACT: The author describes a siphon of his design that is marketed by the firm where he works under the trade name "Standard". The siphon is suitable for sampling of large volumes of liquids, for independent filtration installations, and as a pump for filling of sampling bottles. It uses a rubber balloon, a polyethylene tube, a ground glass valve, and a glass container. Operating instructions for the apparatus are given. Orig. art. has: 2 figures. [JPRS]

SUB CODE: 13, 16 / SUBM DATE: 07May64

Card 1/1

VIGNAU, MICHEL,
    JEANNE PATIN, Ind. parfum. 5, 127-31 (1950)

VIGNER, E

AUTHOR: Wigner, E. (Vigner, Ye.)   SOV/53-65-2-10/14

TITLE: Relativistical Invariance and Quantum Effects (Relyativistskaya
             invariantnost' i kvantovyye yavleniya)

PERIODICAL: Uspekhi fizicheskikh nauk, 1958, Vol. 65, Nr 2, pp. 257-281 (USSR)

ABSTRACT: This is a translation of an English-language article published in
             "Reviews of Modern Physics", 1957, Vol. 29, p. 255. (The name of
             the translator is not given). There are 7 figures and 17
             references.

             1. Physics   2. Mathematics

Card 1/1

VIGNER, Miroslav, prof. inz.

> A new passenger car factory in Mlada Boleslav. Automobil
> Cz 8 no. 6:2-17 Je '64.
>
> 1. Automobilove zavody National Enterprise, Mlada Boleslav.

VIGNER, M.

VIGNER, M. Complex rationalization of production.   p. 270.

Vol. 4, No. 7, July 1956.
STROJIRENSKA VYROBA.
TECHNOLOGY
Praha, Czechoslovakia

So: East European Accession, Vol. 6. No. 3, March 1957

VIGNER, Miloslav, prof. inz.

Products of the Automobilove zavody National Enterprise in the past and today. Stroj vyr 12 no.11:812-813 '64.

1. Deputy Manager of the Automobilove zavody National Enterprise, Mlada Boleslav.

VIGNOLA, J., BAROZZI, DA.

"O pięciu porządkach w architekturze" (On five orders in architecture), by
J. Vignola, Da Barozzi. Reported in <u>New Books</u> (Nowe Ksiazki), No. 14, July 15,
1955

1534. THE SIGNIFICANCE OF ANTITOXIC AND ANTIBACTERIAL FACTORS
IN ACTIVE IMMUNITY AGAINST EXPERIMENTAL GAS GANGRENE
CAUSED BY B. PERFRINGENS (Russian text) - Vigodchikov G. V.,
Volkova Z. M., Zelevinskay S. A. and Larina I. A. - Z.
MIKROBIOL. 1957, 10 (120-125) Tables 5

Antigens used were purified toxoid and 3 different protein fractions of C. perfrin-
gens, the first slightly toxic, the 2nd and 3rd nontoxic. After immunization with
the first fraction the blood of rabbits contained 0.05 A. U. antitoxin, the agglutin-
ation reaction was positive 1:10, the precipitation reaction 1:1,000,000, and the
CFT was ++++. Revaccination gave an increase of antitoxin titre up to 0.5 A. U.
The animals became resistant to infection with 0.1 l. of bacterial culture. Im-
munization with the 2nd and 3rd fractions provoked a similar production of anti-
bodies with the exception of antitoxin, the amount of which was less than 0.05 A. U.
The majority of animals, however, were resistant to infection with 0.1 l. of
bacterial culture. Immunization with toxoid combined with the protein fractions
also caused the formation of agglutinins (1:10-1:80), precipitins (1:100,000-
1:5,000,000) and antitoxin (1-5 A. U.). Revaccination increased the antibody titres
5-10 times, but the antitoxin titre did not exceed the antitoxin level after immuni-
zation with toxoid only. All animals showed a high resistance to experimental gas
gangrene. The authors concluded that the essential protective factor in immunity
is the antitoxin and that antibacterial antibodies play a secondary role.

Kaulen - Moscow

VIGODCHIKOV, G. V.

"Microbiology and Immunology of Staphylococcal Diseases."

report submitted for the International Congress for Microbiology, Stockholm, Sweden,
4-9 Aug 1958.

VIGONOV, V.

"Soaring flight in wintertime. Tr. from the Russian", p. 10, (AVIATI
SPORTIVA, Vol. 5, No. 12, Dec. 1954, Bucuresti, Rumania)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4,
No. 4, April 1955, Uncl.

VIGOROV, L.I.

Catechins in fruit and berry plants. Fiziol.rast. 9 no.4:461-465
'62.   (MIRA 15:9)

1. Laboratoriya khimii bioaktivnykh veshchestv plodovo-yagodnykh
rasteniy Ural'skogo lesotekhnicheskogo instituta, Sverdlovsk.
    (CATECHOL)   (URAL MOUNTAINS--FRUIT--CHEMICAL COMPOSITION)

Entry of copper and manganese into wheat. L. I. Vig-
orov. Doklady Akad. Nauk S.S.S.R. 90, 017-20(1953).—
Tests with MnSO₄ and CuSO₄ in trace amounts show that
during the 1st half of life of a wheat plant Cu and Mn ac-
cumulate up to seed ripening and filling period; the amount
of Cu per unit of dry wt., however, constantly drops, while
the relative amount of Mn rises, then declines. Only
introduction of these trace elements into the soil causes a
significant increase of their content in the plant proper;
seed pretreatment does not vary their content appreciably
in the grown plant.   G. M. Kosolapoff

USCR.

Card

Authors   :

Title   :

Periodical   :

Abstract   :

Submitted   :   . . . .

VIGOROV, L.I., kandidat biologicheskikh nauk.

Exudation of substances by wheat sprouts during guttation.
Priroda 43 no.2:106-107 F '54.   (MLRA 7:3)

1. Ural'skiy lesotekhnicheskiy institut.   (Wheat)

VIGOROV, L.I.

Regularities of branching of soft spring wheat spikes in the
development of branching. Biul.MOIP.Otd.biol. 59 no.5:53-58
S-O '54.   (MLRA 8:1)
(Wheat)

VIGOROV, L. I.

Absorption and distribution of trace elements in wheat grain. L. I. Vigorov (Ural. Inst., Sverdlovsk). *Doklady Akad. Nauk S.S.S.R.* 91, 119-22 (1953). When grains immersed in $CuSO_4$ solns. (0.0001 M and 0.01 M) reach equil. in respect to Cu content within a few min. depending on the concn. Metal ions require several hrs. for equilibration. Similar results are found for $MnSO_4$. While the absorbed Br from aq. NaBr is readily leached by immersion in H_2O, the retained Cu is but little altered by such leaching. Mn is retained much less firmly than Cu. Examn. of the treated grains showed that Cu and Mn are retained some fold times more by the embryo part of the grain than by the endosperm, although approx. only 15-20% of total Cu and Mn collected by the grain.

G. M. Kosolapoff

ViGoRoV, L.I.

USSR/Biology - Cytology

Card 1/1   Pub. 22 - 40/48

Authors   : Vigorov, L. I.

Title   : Microscopic structure of cells of the aleurone layer of soft wheat-seeds

Periodical : Dok. AN SSSR 98/3, 479-482, Sep 21, 1954

Abstract   : Cytological investigation of the microscopic structure of cells of an
aleurone layer of soft wheat-seeds and the results obtained are described.
Ten USSR references (1934-1953). Drawings.

Institution : The Ural Forest-Technical Institute, Sverdlovsk

Presented by: Academician A. L. Kursanov, July 16, 1954

Microchemical study of podzolized soils. L. I. Vigorov (Ural Inst. Wood Technol., Sverdlovsk). *Agrobiologiya* 1955, No. 5, 93-107.—The humus fraction in the soil is analyzed microscopically for proteins (microbial or of plant residues) with the aid of xanthoprotein reactions and other biochem. tests. Information can be obtained by this method on the various proteins of bacterial cells attached to the org. fraction, on the bacterial zooglea, and on other sources of org. matter in the soil. The results on 2 varieties of podzolized soils also present data on total N, in 0.05 HCl ext., humic and fulvic acids, and 10% NaOH ext., as well as the total P in the soils and % of P in humic and fulvic acids. The data are discussed quite at length with speculative ideas with reference to nutrition of plants and the role of bacteria in the cycle.
                                                      J. S. Ioffe

VIGOROV, L.I.

USSR . Inactivation of catalase of wheat sprouts with salts of heavy metals and reactivation of the artificially formed zymogens. L. I. Vigorov (Ural Wood-Tech. Inst., Sverdlovsk). *Biokhimiya* 20, 3-15(1955).--The formation of a Cu-catalase complex requires approx. 10% of the metal that is required in the formation of a Pb-catalase complex. Pb does not inactivate catalase completely even in high Pb(NO₃)₂ concns. In the state of Cu-zymogen catalase is inactivated irreversibly, whereas Pb-zymogen can be reactivated with the aid of weakly alk. phosphate soln. The toxic effect of Pb(NO₃)₂ on the catalase of wheat grains, wheat sprouts, and wheat germ depends upon the action of the metal ion, the medium pH, the rate of H₂O absorption, and the changes in the processes of metabolism and of enzymic synthesis. The quantity of Pb permeating into the living tissues is insufficient to cause notable enzyme inactivation, while the metal-zymogens of the catalase are rapidly transformed into a nonreactive state and are thus excluded from the normal metabolism of the organism. B. S. L.

VIGOROV, L.I.

Mineralization of proteins by soil bacteria. L. I. Vigorov (Ural Inst. Wood Technol., Sverdlovsk). *Mikrobiologiya* 24, 422-8(1955).—Whereas the org. N compds. of *Clostridium pasteuriarum* and *Bacillus subtilis* cells are mineralized rapidly in the soil, azotobacter cells (which stop growing if the carbohydrate supply is spent) undergo only slow mineralization in the soil. Proteases of the bacterial cells themselves take part in the protein decompn. In ammonification of bacterial proteins a state of equil. is set up which involves org. N subject to mineralization by putrefactive bacteria, org. N assimilable by new cells, and inorg. (NH₃ and nitrate) N. The relations in this equil. are sensitive to conditions and are not the same in soils as in artificial culture media. Mineralization rates for the latter are tabulated; for azotobacter the tests were made both with and without a toluene layer.   Julian F. Smith

VIGOROV, L.I.

Removal of nitrogen by weeds in spring wheat fields. Bot.zhur.40
no.5:703-705 S-O '55.   (MLRA 9:4)

1.Ural'skiy lesotekhnicheskiy institut, Sverdlovsk.
          (Weeds) (Nitrogen)

Vigorov, L.I.

USSR/ Biology--Botany

Card 1/1   Pub. 86--23/39

Authors   : Vigorov, L. I., Cand. Biol. Sc.

Title   : "Sugar sickness" of plants

Periodical : Priroda 44/1, 109--110, Jan 1955

Abstract   : The fact that plants normally secrete sugar, most generally in the form of honey in the flower, but sometimes in other parts of the plant, is pointed out to show that this product plays a part in the economy of the plant. Sometimes the life processes of the plant function abnormally causing loss of sugar. Instances are described where plants secreted sugar from their leaves. These were the ficus carica, the lemon, the oleander and the mulberry. The scale insect was the cause. Illustrations.

Institution : ..... *Ural Forest Technology Inst.*

Submitted   : .....

Vigorov, L. I.

MD

Microchemical study of topography of protein substances in the grain matter of soft wheats. L. I. Vigorov. Doklady Akad. Nauk S.S.S.R. 105, 133-6 (1955).—Histological examn. of wheat grains is described, with general description of appearance of the stained portions tested for nucleoproteins, for xanthoproteic test, tyrosine, arginine, histidine, cystine, and tryptophan contents. The aleuronic layers contained the largest concns. of nucleoproteins, arginine, and tryptophan; subaleuronic structures were particularly rich in cyclic amino acids (xanthoproteic test), while the starchy structures were rich in histidine and tyrosine, particularly the former.   G. M. Kosolapoff

VIGOROV, L.I.

VIGOROV, L.I.

Development of new forms during the change of various winter wheat species into spring wheat. Zap. Sverd. otd. VBO no.3: 3-19 '64   (MIRA 18:2)

VIGOROV, L.I.

Characteristics of the inheritance of vitamin C in hybrids
of northern apple varieties. Zap. Sverd. otd. VBO no.2:51-
65 '62.   (MIRA 16:8)

VIGOROV, L. I.

Acclimatization of various strains of Azobacter in the roots
and rhizosphere of spring wheat grown on Podzolic soil. Mikro-
biologiia 30 no.3:478-483 My-Je '61.   (MIRA 15:7)

1. Lesotekhnicheskiy institut, Sverdlovsk.

     (AZOTOBACTER)   (PODZOL—MICROBIOLOGY)

VIGOROV, Leonid Ivanovich; KUZNETSOV, P.A., red.; YEZHOVA, L.L.,
tekhn. red.

[Course on the physiology of woody plants] Praktikum po fi-
ziologii drevesnykh rastenii. Moskva, Gos. izd-vo "Vysshaia
shkola," 1961. 146 p.   (MIRA 15:3)
          (Woody plants--Physiology)

VIGOROV, L.I.

Catechol content of apples. Izv. vys. ucheb. zav.; pishch. tekh.
no. 2:45-50 '61.   (MIRA 14:5)

1. Ural'skiy lesotekhnicheskiy institut. Kafedra botaniki.
            (Apple) (Catechol)

VIGOROV, L.I.

Comparative study of aleurone tissues in the caryopsis of cultivated
and wild gramineous plants. Biul. MOIP. Otd. biol. 65 no.1:101-108
Ja-F '60.
                (GRASSES)   (SEEDS—ANATOMY)   (MIRA 13:7)

VIGOROV, L.I., kand.biolog.nauk (Sverdlovsk).

Fungus on wheat. Priroda 50 no.5:112 My '61.   (MIRA 14:5)
      (Wheat—Dieseases and pests)   (Fungi)

USSR/Soil Science - Physical and Chemical Properties of Soil.   J

Abs Jour   : Ref Zhur Biol., No 19, 1958, 86742

Author   : Vigorov, L.I.
Inst   :
Title   : A Microchemical Study of Podzolic Soils.

Orig Pub   : Agrobiologiya, 1955, No 5, 93-107

Abstract   : No abstract.

Card 1/1

VIGOROV, L.I. [Vihorov, L.I.]

Ammonification of bacterial nitrogenous substances. Mikrobiol.
zhur. 21 no.2:9-16 '59.   (MIRA 12:9)

1. Iz Sverdlovs'koi laboratorii fiziologii roslin i mikrobiologii.
(AMMONIA)   (BACTERIA)

VIGOROV, L.I.

How organomineral fertilizers affect wheat on Podzolic soils.
Agrobiologiia no.1:54-57   Ja-F '59.   (MIRA 12:4)

1. Laboratoriya fiziologii rasteniy i mikrobiologii Ural'skogo
lesotekhnicheskogo instituta, g. Sverdlovsk.
            (Wheat--Fertilizers and manures)
                    (Podzol)

USSR/Cultivated Plants. Cereals.   M

Abs Jour: Ref Zhur-Biol., No 17, 1958, 77600.

Author : Vigorov, L.I.
Inst   :
Title   : Accelerated Method of Determination of Protein in
          Wheat and Tryptophan in Corn.

Orig Pub: Selektsiya i semenovodstvo, 1957, No 4, 66-67.

Abstract: No abstract.

Card   : 1/1

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30(1)
AUTHOR: Vigorov, L.,I.   SOV/20-122-6-43/49

TITLE: Particular Features of the Catalase in Podsol (Osobennosti
               katalazy podzolistoy pochvy)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 122, Nr 6, pp 1107-1110
               (USSR)

ABSTRACT: According to the very latest papers (Refs 1-4) the fertility
               of soils is to be estimated according to the activity of
               their ferments. But there are also contrary opinions (Refs
               5-7). It is possible that a correlation in the above-men-
               tioned sense does not exist for all soils,but different
               ferments may serve as indicators for different kinds of soil.
               Among soil ferments the catalase activity can be determined
               in the most rapid way so that it is regarded as the most
               comfortable indicator for soil fertility. The author
               investigated the catalase activity of grey podsol and
               dark-colored meadow podsol soil (characterized in reference 9).
               Both soils show a great difference in their humus content
               (3.4 and 11.7 %,respectively) and in their fertility. If
Card 1/3   catalase is a ferroprotein it is not able to move in
               gelatinous matter. Most of the humic substances in the soil,

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however, show such properties. Of course, it was to be
expected that the highest catalase activity will be concen-
trated in the topmost layers of the soil where also microbes
and organic remainders containing this ferment are accumulated.
Table 1 throws some light on this feature for both kinds of
soil and furthermore gives the total nitrogen content which
characterizes the stock in organic substance of individual
soil layers. In spite of the fact that the nitrogen (and
humus) content in the arable layer of the dark soil is a
multiple of the content of that in the grey podsol, the
catalase activity has turned out to be quite resembling in
both soils. Therefore the catalase index determined according
to the usual methods cannot serve as an indicator of the
fertility of the clay sorts investigated, especially if its
variability during the time of vegetation is taken into
account. To clarify the nature of the catalase systems of the
soil the author investigated their thermal stability and
their resistance to acids and drying. The tables 2 and 3 give
the results. As they show, the thermally stable catalytic
system represents half the catalase activity in dark podsol
Card 2/3   soils and about 2/3 in grey soils. A perfect proportionality,

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however, does not exist. Part of the soil catalase differs
from the phytocatalase in its resistance to acids. Also the
resistance to drying is different in the two kinds of catalase.
Finally the author looks for reasons causing possibly these
differences. He came to the conclusion that the catalysts of
the podsol soils which decompose H_2O_2, are for the main part
thermally stable. 50-75 % of their activity is bound to the
catalase of the spores or to non-ferment-like compounds of the
soil which pretend (imitate) a catalase effect. There are the
so called "pseudo-catalases". There are 3 tables and 18 Soviet
references.

ASSOCIATION: Ural'skiy lesotekhnicheskiy institut g. Sverdlovsk (Ural
                Forest-Technical Institute, Sverdlovsk)

PRESENTED: June 9, 1958, by I. V. Tyurin, Academician

SUBMITTED: April 5, 1958

Card 3/3

VIGOROV, L.I., kand. biol. nauk.

Absorption of mineral nitrogen fertilizers and organic fertilizers by micro-organisms in Turf-Podzolic soils. Agrobiologiia no.2:88-94 Mr-Ap '58.   (MIRA 11:4)

1. Ural'skiy lesotekhnicheskiy institut, Sverdlovsk.
   (Soil micro-organisms)   (Fertilizers and manures)   (Podzol)

VIGOROV, L.I.

Conditions for the acclimation of Azotobacter in Turf-Podzolic soils
and on wheat roots [with summary in English]. Mikrobiologiia 27
no.1:89-94 Ja-F '58.   (MIRA 11:4)

1. Ural'skiy lesotekhnicheskiy institut, Sverdlovsk.
     (URAL MOUNTAIN REGION--AZOTOBACTER) (PODZOL) (WHEAT)

VIGOROV, L.I. (Sverdlovsk)

Determining the pH of soils by the method of parallel buffer titration to zero [with summary in English]. Pochvovedenie no.7:62-64 Jl '57.   (MIRA 10:11)
            (Soil acidity)   (Titration)

VIGOVSKIY, A.I.; GUTSEVICH, A.V.

Preliminary results of studying natural foci of lymphocytic
choriomeningitis in the western Ukraine. Dokl. AN SSSR
140 no.5:1223-1225 O '61.   (MIRA 15:2)

1. Zoologicheskiy institut AN SSSR. Predstavleno akademikom
Ye.N.Pavlovskim.   (UKRAINE--MENINGITIS)
                         (ANIMALS AS CARRIERS OF DISEASE)

VIGOVSKIY, A.I. (L'vov)

Isolation of a virus of the tick-borne encephalitis group from a patient
in the western Ukraine. Vop. virus. 9 no.2:163-166 Mr-Ap '64.

(MIRA 17:12)

GUTSEVICH, A.V.; VIGOVSKIY, A.I.

Isolation of a neurotropic virus from Culicoides. Vop. virus. 5
no. 6:657-659 N-D '60.   (MIRA 14:4)

1. Kafedra obshchey biologii i parazitologii imeni Ye.N.
Pavlovskogo voyenno-meditsinskoy akademii imeni S.M. Kirova,
Leningrad i sanitarno-epidemiologicheskiy otryad No. 28, L'vov.
                    (BITING MIDGES)

VIGOVSKIY, N.

> Intensify roadside planting of highways. Avt. dor. 25 no.2:19
> F '62.   (MIRA 15:2)
>   (Roadside improvement)

LYASHENKO, G., inzh.; VIGOVSKIY, N., inzh.

Improve planting techniques and maintenance of snow breaks.
Avt.dor. 22 no.11:30 N '59.   (MIRA 13:2)
                  (Snow fenses)

VIGOVSKIY, S.L., inzh.

Apparatus for changing stands in storage battery rooms.
Elek. i tepl. tiaga 3 no.4:20-21 Ap '59.
(MIRA 12:7)
(Electric railroads--Substations--Equipment and supplies)

VIGOVSKIY, S.L., kand.tekhn.nauk

Insulation of single-phase transformers must be strengthened. Elek.
i tepl. tiaga 2 no.8:45 Ag '58.   (MIRA 11:9)
  (Electric transformers) (Electric insulators and insulation)

VIGOVSKIY, S.L.

Improve the quality of ground-protection relays. Elek. i tepl.
tiaga no.6:46 Je '58.   (MIRA 11:6)

1.Nachal'nik remontno-revizionnogo tsekha uchastka energosnabzheniya,
stantsiya Chishmy, Ufimskaya doroga.
        (Electric railroads--Wires and wiring)

VIGOVSKIY, S.P.

Wire crimping machine. Stroi.i dor.mashinostr. 2 no.9:33 S '57.
(Wire drawing)   (MIRA 10:11)

VIGOVSKIY, S.P.

Forging crown nuts.   Stroi.i dor.mashinostr.   2   no.7:35
Jl '57.   (MIRA 10:7)

(Bolts and nuts)

SUBJECT   USSR/MATHEMATICS/Integral equations   CARD 1/5   PG - 82
AUTHOR   VIGRANENKO T.I.:
TITLE   On a Cauchy problem for integro-differential equations in partial
              derivatives of first order.
PERIODICAL   Uspechi.mat.Nauk 10, 2, 147-152 (1955)
              reviewed 6/1956

In the integro-differential equation

(1) $$X[u] = \lambda \int_D k(M,N) Y[u] \, dN$$

X and Y are the linear differential operators:

$$X[u] = \sum_{i=1}^{n} X_i(M) \frac{\partial u}{\partial x_i} \; ; \qquad Y[u] = \sum_{k=1}^{n} Y_k(N) \frac{\partial u}{\partial y_k} + Y_{n+1}(N) u(N).$$

An integral surface is sought which contains a given $(n-1)$-dimensional manifold

(2) $$\begin{cases} x_k = \varphi_k(t_1, \ldots, t_{n-1}) \\ u = \varphi(t_1, \ldots, t_{n-1}) \end{cases} \qquad k = 1, 2, \ldots n-1,$$

where φ_k and φ are continuously differentiable functions of the t_i. Further

it is assumed: that the coefficients of X are continuous and continuously differentiable as to coordinates of the point M; that the coefficients of Y are integrable functions in a bounded region D of the n-dimensional space; that the kernel k and its derivatives are bounded functions of the pair of points (M,N) for $M \in D$, $N \in D$. Beside of (1) the author considers the system

(3) $\dfrac{dx_k}{ds} = X_k(M)$;   (3') $\dfrac{du}{ds} = \lambda \displaystyle\int_D k(M,N)Y[u]dN$ k=1,2,...n.

Let (4): $x_k = x_k(s,t_1,...,t_{n-1})$ (k=1,2,...n) be the solution of (3) for the initial condition $x_k = \varphi_k(t_1,...,t_{n-1})$ (k=1,2,...n). It is assumed that (4) is uniquely solvable relative to s and t_k in a certain region $\overline{D}$:

(5) $s = \psi(x_1,...x_n)$; $t_k = \psi_k(x_1,...x_n)$ (k=1,2...n).

By integration of (3') with respect to s one obtains for suitable initial condition

$$u = \varphi(t_1,...t_{n-1}) + \lambda \int_0^s ds \int_D k([M],N)Y[u]dN,$$

where [M] means that the coordinates of M are replaced by their values (4).

Changing the sequence of integration, denoting

$$\int_0^s k([M],N)ds = L(s,t_1,\ldots t_{n-1};N),$$

considering (5) and putting $\varphi(\Psi_1 \ldots \Psi_{n-1}) = \Theta(M)$, then follows:

(6) $u(M) = \Theta(M) + \lambda \int_D P(M,N)Y[u]dN$.

The solution of (1) is reduced to the solution of (6). If $u_0(M)$ is the solution of (6) for a value of λ, then it is also a solution of the given Cauchy problem. In order to solve (6) indeed, (6) is transformed as an integral equation:

(7) $v(M) = \phi(M) + \lambda \int_D Q(M,N)v(N)dN,$

where $\phi(M) = Y[\Psi]$ and $Q(M,N) = Y_M[P]$.

If $u(M)$ is a solution of (6), then $Y u$ is a solution of (7). Conversely, if $v_o(M)$ is a solution of (7), then (6) has the solution

$$(8) \qquad u(M) = \Theta(M) + \lambda \int_D P(M,N) v_o(N) dN .$$

The following theorems are proved:

I. Let λ be no eigenvalue of the kernel Q and $v_o(M)$ be the solution of (7) corresponding to this value λ . Then the solution of (6) is given by (8). The solution is unique.

II. If $\lambda = \lambda'$ is an eigenvalue of Q, then the system

$$(9) \qquad u_k(M) = \lambda' \int_D P(M,N) \dot{v}_k(N) dN \qquad (k=1,2,\ldots p)$$

satisfies the equation (1), vanishes on $x_k = \varphi_k(t_1,\ldots t_{n-1})$, $n = 0$ $(k=1,\ldots n)$ and gives all linearly independent solutions of (1) for $\lambda = \lambda'$, which satisfy the initial condition.

III. Let $v^o(M)$ be a solution of (7) for $\lambda = \lambda'$. Then for these values λ the integro-differential equation (6) has the solution

$$u(M) = \Theta(M) + \lambda' \int P(M,N) v^o(N) dN + \sum^p A_k u_k(M),$$

where A_k are arbitrary constants and $u_k(M)$ is given by (9).

Thus if λ is an eigenvalue of Q, then (1) is solvable or not in dependence of the fact if for this value (7) has a solution or not. If (2) is a characteristic manifold, then (1) has either no solution or infinitely many solutions.

VIGRANEHKO, T.I.

     Solutions for a class of integral-differential equations. Trudy Inst.
mat. i mekh. AN Uz.SSR no.10:85-104 part 2 '53.   (MIRA 8:4)
        (Differential equations) (Integral equations)

VIGRANENKO,T.I.

Cauchy problem for partial integral differential equations
of the first order. Usp.mat.nauk 10 no.2:147-152 '55.
    (Differential equations, Partial)   (MLRA 8:8)

VIGRANENKO, T.I. (Leningrad)

One integral equation and A.I.Nekrasov's method.   Izv.vys.ucheb.zav.;
mat. no.5:6-18 '61.   (MIRA 14:10)
                        (Integral equations)

VIGRANENKO, T.I. (Leningrad)

Solutions of one class of integral-differential equations and the
conditions of A.I. Nekrasov. Izv. vys. ucheb. zav.; mat. no. 3:93-
100 '60.   (MIRA 13:12)
                        (Differential equations)

18805

16.4500

AUTHOR: Vigranenko, T. I.

TITLE: On an Integral equation and the method of A.J. Nekrasov

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Matematika,
no. 5, 1961, 6-18

TEXT: V. V. Vasil'yev (Ref. 2: Resheniye zadachi Koshi dlya odnogo
klassa lineynykh integro-differentsial'nykh uravneniy [The solution
of the Cauchy problem for a class of linear integro-differential
equations], DAN SSSR, 100, no. 5, 1955) investigated the Cauchy prob-
lem $y^{(k)}(a) = y_0^{(k)}$ $(k = 0,1,2,\ldots,n-1)$ for the equation

$$L[y(x)] = \lambda \int_a^b \sum_{\alpha=0}^m K_\alpha(x,t) y^{(\alpha)}(t)dt . \qquad (a)$$

The investigation was based on the consideration of the equation

$$F(x) = \lambda \int_a^b \left[\{G_\nu(t)K_\nu(x,t)\} + \int_a^t \{H_\nu(t,\eta)K_\nu(x,t)\}F(\eta)d\eta \right] dt, \qquad (1)$$

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where

$$\{G_\nu(t)K_\nu(x,t)\} = \sum_{\nu=0}^{m} G_\nu(t)K_\nu(x,t)$$

$$\{H_\nu(t,\eta)K_\nu(x,t)\} = \sum_{\nu=0}^{m} H_\nu(t,\eta)K_\nu(x,t) \Bigg\} \quad (2)$$

$$G_k(x) = \sum_{i=1}^{n} c_i y_i^{(k)}(x) \quad (k = 0,1,2,\ldots,m), \quad (3)$$

$\{y_i(x)\}$ denotes the fundamental system of the solutions of $L[y(x)] = 0$, $H_0(x,\eta)$ is the well-known Cauchy function corresponding to this equation, and $y_i^{(k)}(x)$ and $H_k(x,\eta)$ are the k-th derivatives with respect to x of $y_i(x)$ and $H_0(x,y)$. The $c_1, c_2, \ldots, c_n$ are arbitrary constants of the general solution of $L[y(x)] = 0$.

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On an integral equation and the . . . S/140/61/000/005/001/007
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The equation (1) is equivalent to the Fredholm integral equation

$$F(x) = f(x) + \lambda \int_a^b K(x,t) \, F(t) \, dt \qquad (4)$$

with

$$K(x,t) = \int_t^b \left\{ H_\nu (\eta, t) \, K_\nu(x, \eta) \right\} d\eta \qquad (5)$$

$$f(x) = \int_a^b \left\{ G_\nu (t) \, K_\nu (x,t) \right\} dt \qquad (6)$$

so that the Fredholm theory is applicable to (1) or (4).

Vasil'yev, however, uses the method due to A. J. Nekrasov and introduces a new function for the solution of (1)

$$D_i(\lambda) = \sum_{n=0}^{\infty} (-1)^n \frac{\lambda^n}{n!} \int_a^b \ldots \int_a^b da_1 \ldots da_n \times$$

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$$\times \int_a^{a_1} \cdots \int_a^{a_n} \begin{vmatrix} \{H_\tau(a_1, r_1) K_\tau(r_1, a_1)\} \cdots \{H_\tau(a_n, r_n) K_\tau(r_1, a_n)\} \\ \cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots \\ \{H_\tau(a_1, r_1) K_\tau(r_n, a_1)\} \cdots \{H_\tau(a_n, r_n) K_\tau(r_n, a_n)\} \end{vmatrix} da_1 \ldots da_n; \quad (7)$$

$$D_1\left(\begin{matrix} x_1 \ldots x_p \\ t_1 \ldots t_p \end{matrix} \lambda\right) = \sum_{q_1, \ldots, q_p = 0}^{m} G_{q_1}(t_1) \ldots G_{q_p}(t_p) \varPi_{q_1 \ldots q_p}\left(\begin{matrix} x_1 \ldots x_p \\ t_1 \ldots t_p \end{matrix} \lambda\right), \quad (8)$$

where $\varPi_{q_1 \ldots q_p}\left(\begin{matrix} x_1 \ldots x_p \\ t_1 \ldots t_p \end{matrix} \lambda\right)$ are certain entire functions of λ . Then

the solutions of (1) are represented with the aid of the functions D_1.
The present paper shows that the functions introduced by Vasil'yev are
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not sufficient for a complete investigation of the equation (1), that in (Ref. 2) many considerations are superfluous and some of them are uncomplete, that, however, the use of the Vasil'yev functions beside of the Fredholm determinants is advantageous since thereby the representation of the eigenfunctions of the kernel (5) is essentially simplified.

At first it is shown that $D_1(\lambda)$ is identical with the Fredholm determinant $D(\lambda)$ of the kernel (5). Then it is shown that the first Fredholm minor can be represented by

$$D(x,t;\lambda) = \sum_{i=0}^{m} \int_{t}^{b} H_i(\eta,t) H_i(x,\eta;\lambda)\, d\eta \qquad (16)$$

where

$$H_i(x,t;\lambda) = \sum_{n=0}^{\infty} (-1)^n \frac{\lambda^n}{n!} \int_{a}^{b} \cdots \int_{a}^{b} K_i \begin{pmatrix} x; & r_1 \ldots r_n \\ t; & r_1 \ldots r_n \end{pmatrix} dr_1 \ldots dr_n$$

$$(i = 0,1,2,\ldots, m). \qquad (15)$$

where the definition (15) of $H_i(x,t;\lambda)$ is equivalent to the

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definition of Vasil'yev. By a generalization to minors of a higher order it follows

$$D\left(\begin{matrix} x_1 \dots x_p \\ t_1 \dots t_p \end{matrix}\lambda\right) =$$

$$= \sum_{q_1 \dots q_p = 0}^{n} \int_{t_1}^{b} \dots \int_{t_p}^{b} \prod_{l=1}^{p} H_{q_l}(s_l, t_l) \Pi_{q_1 \dots q_p}\left(\begin{matrix} x_1 \dots x_p \\ s_1 \dots s_p \end{matrix}\lambda\right) ds_1 \dots ds_p. \quad (16')$$

with

$$\Pi_{q_1 \dots q_p}\left(\begin{matrix} x_1 \dots x_p \\ t_1 \dots t_p \end{matrix}\lambda\right) =$$

$$= \sum_{n=0}^{\infty}(-1)^n \frac{\lambda^n}{n!} \int_{a}^{b} \dots \int_{a}^{b} K_{q_1 \dots q_p}\left(\begin{matrix} x_1 \dots x_p; \ r_1 \dots r_n \\ t_1 \dots t_p; \ r_1 \dots r_n \end{matrix}\right) dr_1 \dots dr_n. \quad (15')$$

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$$K_{q_1 \ldots q_p}\left(\begin{matrix} x_1 \ldots x_p; & r_1 \ldots r_n \\ t_1 \ldots t_p; & r_1 \ldots r_n \end{matrix}\right) =$$

$$= \begin{vmatrix} K_{q_1}(x_1, t_1) \ldots K_{q_p}(x_1, t_p) K(x_1, r_1) \ldots K(x_1, r_n) \\ K_{q_1}(x_p, t_1) \ldots K_{q_p}(x_p, t_p) K(x_p, r_1) \ldots K(x_p, r_n) \\ K_{q_1}(r_1, t_1) \ldots K_{q_p}(r_1, t_p) K(r_1, r_1) \ldots K(r_1, r_n) \\ K_{q_1}(r_n, t_1) \ldots K_{q_p}(r_n, t_p) K(r_n, r_1) \ldots K(r_n, r_n) \end{vmatrix}. \qquad (14')$$

Then it is shown that the functions (15') satisfy the relations

$$\varPi_{q_1 \ldots q_p}\left(\begin{matrix} x_1 \ldots x_p \\ t_1 \ldots t_p \end{matrix}_\lambda\right) =$$

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$$= \sum_{\beta=1}^{p} (-1)^{a+\beta} K_{q_{\beta}}(x_a, t_\beta) \, \varPi'_{q_1 \dots q_p} \left(\begin{matrix} x_1 \dots x_{a-1} \, x_{a+1} \dots x_{p} \\ t_1 \dots t_{\beta-1} \, t_{\beta+1} \dots t_{p} \end{matrix} \lambda \right) +$$

$$+ \lambda \int_a^b K(x_a, r) \, \varPi_{q_1 \dots q_p} \left(\begin{matrix} x_1 \dots x_{a+1} \, r \, x_{a+1} \dots x_{p} \\ t_1 \dots t_{a-1} \, t_a \, t_{a+1} \dots t_{p} \end{matrix} \lambda \right) dr \qquad (20')$$

$$(q_1, \dots, q_p = 0, 1, 2, \dots, m),$$

$$\varPi_{q_1 \dots q_p} \left(\begin{matrix} x_1 \dots x_p \\ t_1 \dots t_p \end{matrix} \lambda \right) =$$

$$= \sum_{a=1}^{p} (-1)^{a+\beta} K_{q_\beta}(x_a, t_\beta) \, \varPi'_{q_1 \dots q_p} \left(\begin{matrix} x_1 \dots x_{a-1} \, x_{a+1} \dots x_{p} \\ t_1 \dots t_{\beta-1} \, t_{\beta+1} \dots t_{p} \end{matrix} \right) +$$

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$$+\lambda \sum_{l=0}^{m}\int_{a}^{b} K_{lq_{\beta}}(\eta,\, t_{\beta})\, \Pi_{q_{1}\ldots l\ldots q_{p}}\binom{x_{1}\ldots x_{\beta-1}\, x_{\beta}\, x_{\beta+1}\ldots x_{p}}{t_{1}\ldots t_{\beta-1}\, \eta\, t_{\beta+1}\ldots t_{p}}\lambda\, d\eta \qquad (23')$$

$$(q_{1},\ldots,q_{p}=0,1,2,\ldots,m).$$

(the prime denotes that the index q_{β} is omitted for Π).

These results are used for showing that the use of Vasil'yev's functions often is advantageous. Let e. g. λ' be the r-fold root of $D(\lambda) = 0$. The linearly independent functions satisfying the equation (4) with $\lambda = \lambda'$ can be written in the simple form

$$\overline{\varphi}_{a}(x) = \frac{\overline{\Pi}_{0}\left(\begin{smallmatrix} x'\ldots x'_{a-1}\, x\, x'_{a+1}\ldots x'_{p} \\ t'\ldots t'_{a-1}\, t'_{a}\, t'_{a+1}\ldots t'_{p} \end{smallmatrix}\lambda'\right)}{\overline{\Pi}_{0}\left(\begin{smallmatrix} x'_{1}\ldots x'_{p} \\ t'_{1}\ldots t'_{p} \end{smallmatrix}\lambda'\right)} \qquad (a=1,2,\ldots,p), \qquad (32)$$

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$$\bar{\Pi}_0 \begin{pmatrix} x_1 \cdots x_p \\ t_1 \cdots t_p \end{pmatrix} \lambda) = \sum_{n=0}^{\infty} (-1)^n \frac{\lambda^n}{n!} \int_a^b \cdots \int_a^b \bar{K}_0 \begin{pmatrix} x_1 \cdots x_p; & r_1 \cdots r_n \\ t_1 \cdots t_p; & r_1 \cdots r_n \end{pmatrix} dr_1 \cdots dr_n,$$

and the determinant $\bar{K}_0 \begin{pmatrix} x_1 \cdots r_n \\ t_1 \cdots t_n \end{pmatrix}$ of (14') appears by the fact that in

(14') it is put $q_1 = q_2 = \cdots = q_p = 0$. An example is given.
There are 6 Soviet-bloc references.
SUBMITTED: March 23, 1959

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PIL'MAN, N.I., kand.med.nauk; VIGRAYZER, G.Z.

      Tumorous growth of the eyelid spreading into the orbit. Vest.
oft. no.4:43-45 '61.   (MIRA 14:11)

      1. Glaznoye otdeleniye (zav. N.I. Pil'man) Kiyevskoy gorodskoy
spetsializirovannoy bol'nitsy.
          (EYELIDS—TUMORS)   (ORBIT (EYE))

VIGRAYZER, G.Z. [Vihraizer, H.Z.]; IVANOVA, Ya.M., kand.med.nauk

Cancer of the stomach in a 14-year-old boy. Ped., akush. i gin. 20
no.4:39-41 '58.   (MIRA 13:1)

1. Patologo-anatomicheskoye otdeleniye (konsul'tant - prof. N.O.
Maksimovich) i detskoye otdeleniye (zav. - R.N. Krichevskaya) 3-y
gorodskoy bol'nitsy (glavnyy vrach - T.P. Novikova).
                        (STOMACH--CANCER)

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